

Providing Royal Holloway with full online university status, with seamless communication and collaboration between staff and students.

About Royal Holloway, University of London

Originally two colleges that formally became part of the University of London in 1900 and merged in 1985, Royal Holloway, University of London was one of the first institutions to make higher education available to women. Today Royal Holloway continues to display world-class research in a number of fields, well into the 21st century, and named as one of the top 25 of all UK Universities in The Sunday Times Good University Guide 2021.

Challenges

With the onset of COVID-19, Royal Holloway re-focused its 2020/21 IT programme with a view to achieving full online university status, delivering teaching, learning and research through multi-channel communication and collaboration. To achieve this, the university required a scalable, cost-effective and high-performance solution for remote collaboration (e.g. group chat, file sharing, notebook sharing, assessment setting), supported by the right infrastructure.

One of the major limiting factors in this regard was that staff and students were in two separate tenancies, which would need to be consolidated. In addition to the live environment, the university required a 'non-production' environment to facilitate controlled software development, testing, and UAT, with minimal operating costs.

With a new academic year fast approaching, it was essential that all these solutions could be delivered within an eight-week window.

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CASE STUDY



ROYAL
HOLLOWAY
UNIVERSITY
OF LONDON

CASE STUDY

Solution

Following a competitive process, Exponential-e were awarded a contract, based on milestones, to deliver the fundamental piece of work to enable the university's infrastructure, starting with the merging of Microsoft tenancies.

At the start of the project, Exponential-e provided a dedicated team to lead design workshops with Royal Holloway's key stakeholders in order to define the migration processes, drawing on their deep knowledge of the existing infrastructure to deliver a comprehensive IT transformation proposal that fulfilled a range of strict T&Cs, budget, risk and continuity requirements.

From then on, continued communication was key to achieving the desired outcomes, with regular meetings taking place to ensure targets were met, budgets were adhered to, and potential complications could be pre-emptively resolved. To enable administrative staff to continue working effectively throughout the deployment, the university's internal teams were fully briefed on the impending changes, helping to minimise disruption and ensure end users would be properly supported.

Over a 24-day period, Exponential-e migrated over 10,000 Office 365 user tenancies for student, alumni and test accounts - a complex operation, but one that proved the value of Exponential-e's robust risk guarantee. The expatriated migration was achieved using 'Cloud Commander' tooling, which provided high-speed synchronisation (up to 1TB per hour) of data between tenancies with data fidelity for a broad range of workloads. The result was a fully managed solution for all users, with a dedicated Azure AD Connect deployment and Mail, One Drive and SharePoint migrations between the existing tenancies.

In parallel, Exponential-e worked with Royal Holloway to create a futureproof active directory, with a move to a single forest, single

domain model reducing complexity and administrative overheads. In addition, this sped up authentication and replication, and helped reduce the number of domain controllers required.

A modern hybrid authentication / identity solution was implemented, making intelligent use of Azure Active Directory, ADFS and AD as appropriate. Multi-factor authentication mitigated cyber security risk by requiring a second form of identification before allowing access to resources and data. At the same time, allowing users to use password hash synchronisation with seamless SSO provided them each with a single set of credentials with which to access services, providing a streamlined user experience that helped drive greater collaboration in the Cloud.

An expanded deployment of Microsoft Office 365 opened the door to full online university status, allowing lectures and seminars to continue via the highly regarded Microsoft Teams platform, with the new infrastructure enabling greater utilisation of the Public Cloud, delivering the increased power, flexibility, and cost control. In particular, a Virtual Desktop solution and a range of tools for multi-channel communication and collaboration made it easy for students to submit essays and receive their marks remotely.

Finally, to provide a secure, flexible non-production environment, replica domains and Office 365 environments were deployed, consisting of the 'bare bones' of the primary operating environment.

The partnership between Royal Holloway and Exponential-e continues to evolve, with remote collaboration opening up new channels of learning, supported by an infrastructure with the power, flexibility and scalability to guarantee consistent performance - all while keeping the student experience at the centre of everything.

Solution benefits

- Secure, reliable multi-channel communication and collaboration for more than 10,000 staff, students and alumni, with streamlined access to key resources from anywhere.
- Clear knowledge transfer to the University's IT teams, supporting the user community throughout the project delivery.
- Robust cyber security and identity management, including multi-factor authentication and SSO.
- Full scalability and cost control, with the ability to deploy and remove resources on an as-needed basis via the Public Cloud.
- A clean, modern and sustainable active directory, to support emerging technology in the learning space.
- A simplified single domain, single tenancy Office 365 federation model.

"Merging Microsoft tenancies was essential to underpinning our infrastructure to enable online teaching and learning for the start of a new academic term during a pandemic; implementing Windows Virtual Desktop now allows students to recreate a lab PC environment, while we have the ability to scale up or down, depending on demand."

Mel Gomes Head of IT Commercial Management & Contracts, Royal Holloway, University of London.

About Exponential-e

Innovation is at the core of Exponential-e, and has been since our inception in 2002. We wholly own our super-fast Network, and our fusion of complementary technologies - a carrier-class Network and Cloud infrastructure - means we can deliver enterprise applications at wire speed for a superior end-user experience. We deliver scalable, dynamic and bespoke solutions. Renowned for our responsiveness, coupled with our customer centric approach, and a UK based 24 / 7 x 365 service desk, means we offer unrivalled expertise.



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